RECNOTES

RECREATION RESEARCH PROGRAM

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A work unit of the Recreation Research Program is designed to analyze the efficiency and the effectiveness of contracting various O&M activities and mixes of activities at Corps-managed recreation areas. The following article describes the FY 79 accomplishments under the work unit.

COST EFFICIENCY OF OPERATING AND MAINTAINING CORPS RECREATION AREAS

During FY 79 work was initiated on the work unit "Cost Efficiency of Operating and Maintaining Corps Recreation Areas." The main objective of the work unit is to provide an analysis of the efficiency (both in terms of cost and in-house manpower) and effectiveness of contracting various operations and maintenance (O&M) activities and mixes of activities at Corps-managed recreation areas. Work completed to date includes the following tasks: identification and evaluation of current approaches, development and testing of a cost-tracking system, and identification and evaluation of elements for developing guidelines for performance standards. A description of the work accomplished in FY 79 follows.

Current Approaches

The primary objective of this task was to identify and present a subjective evaluation of current approaches of operating and maintaining Corps recreation areas. In order to identify as many current approaches as possible, a telephone survey to gather data was conducted. Survey questions were designed to address O&M activities and to solicit answers to four general questions concerning those activities. The questions asked included:

- Is the activity accomplished by contract or by in-house personnel or a combination of both?
- Is the activity performed on a seasonal basis and if so, by whom (e.g., by contractor during the recreation season and by in-house personnel the rest of the year)?
- What is the resource/project manager's opinion of the quality of the activities as they are now being performed?
- Are there any preferences in the way the activities should be performed, and/or are there any alternative approaches which project managers feel would be more advantageous?

Activities in the survey are shown in Table 1.

Table 1—O&M Activities Surveyed

Mowing and grounds maintenance
Campsite/group area cleaning
Pumping of pit toilets
Equipment maintenance
Interpretation
Forest timber management
Water supply/treatment facilities
Administration/operation building cleaning
User survey
Restroom/bathhouse cleaning
Trash pickup
Road/pavement maintenance
Law enforcement
Water quality monitoring
Fee collection/gatekeeping
Control of pest species
Sewage treatment facility operation and maintenance
Fish and wildlife management

Data collected will be analyzed to determine if current management strategies vary widely from Division to Division or District to District. The data will be used in FY 80 for the selection of projects to be included in later stages of the research work unit.

Cost-Tracking System

The objective of this task was to develop a methodology for collection of data pertinent to documentation of costs associated with providing for O&M activities at Corps of Engineers recreation areas by in-house resources and by contracted services.

Research was conducted at four Corps projects: Lewisville Lake, Tex.; Lake Barkley, Ky.; Stockton Lake, Mo.; and West Point Lake, Ga. Each of the projects was visited, and the research work unit, the data-collection procedures, and the purpose for gathering the data were explained.

A Workload/Cost Tracking System (WCT) was used to collect and analyze data. The WCT is an automated system designed to assist managers with a flexible work and cost data-collection procedure. ***Workload tracking*** is the process of accounting for the time spent doing a given job. ***Cost tracking,*** on the other hand, is the process of recording all the elements of expenses associated with the performance of a given job, so that reports can be obtained to supply unit and total cost. A Work Report Form is used to record data associated with the cost of performing activities at Corps recreation areas.

A computer file is included in the WCT. The file is utilized to generate a number of reports. The general WCT can provide cost and hourly information for the entire project, the individual parks, the work activities performed within the parks, and the location where the work activity was performed. The report is used to determine what amount of time and money are needed to complete the task. The total cost for X number of applications is also determined from this report.

A labor/cost distribution indicating when work is being done and what days require the greater effort can also be generated from the computer files.

Data collected at the four study projects during the past recreation season indicate the procedures are practical. However, these preliminary results are from only four sites, and the time frame for data collection was short. During FY 80, the number of study sites will be expanded, and the time frame for data collection will be lengthened.

Performance Standards

The primary objective of this task was to provide a method for project management personnel on the preparation and utilization of performance standards for both in-house and contractual maintenance activities. The methodology produced has to be sufficiently general for Corps-wide application, yet specific enough for use in measuring performance.

The eight activities addressed in this task were mowing and grounds maintenance, refuse removal, restroom cleaning and maintenance, building and facility maintenance, road maintenance, plumbing and electrical services, equipment maintenance, and operation of sewage treatment facilities. At each of these activity sites, the following tasks were accomplished:

- Management personnel and maintenance foreman were interviewed on indicators of quality performance for the primary maintenance activities being considered.
- Existing O&M contracts were reviewed and local experiences with enforcement of contracts discussed.
- In-house and contractual O&M procedures were examined. The use of standards was discussed, and local use of reference material was reviewed.
- Onsite inspections of maintenance work in progress were conducted, and photos were taken of a representative sample of conditions found.

The methodology consists of a series of steps designed to give managers a systematic procedure to formulate, organize, and present information in a format reflecting local O&M standards. It contains the guidelines describing the expected qualifications levels to which maintenance functions must adhere and the resources required for carrying out these functions.

The methodology for formulating and maintaining O&M standards consists of the following steps:

Step 1. Development of a land use/maintenance classification system.

Step 2. Classification of areas and facilities according to the classification system.

Step 3. Inventory of areas, facilities, and equipment.

Step 4. Identification of key result areas (major functional groups of maintenance tasks) for which individual standards will be developed.

Step 5. Collection of data and application of a formula that prescribes the component elements of a standard.

Step 6. Presentation and illustration of the standards.

Step 7. Local application and regular updating of the standards.

A formula that includes all factors considered essential for describing the qualitative levels at which specific O&M tasks are to be performed is used for developing O&M standards. The formula consists of seven factors: quality, tasks, unit of work, manpower, equipment and supplies, time, and cost.

The tasks completed during FY 79 have led to preliminary findings and conclusions. The short time frame for collection of data for all tasks and the fact that only four projects were included in the sample preclude final conclusions. During FY 80, data will be analyzed to select 10 projects to be included in an expanded sample. The time frame for data collection will be the FY 80 recreation season. The final guidelines for developing standards for O&M activities will be based on analysis of the FY 80 data and will be submitted to OCE for consideration for issuance of an Engineer Circular. Analysis of workload/cost data will begin toward the end of FY 80 and findings compiled.

FILM RELEASED

Innovative Approaches to Operation and Maintenance at Corps Recreation Facilities

This 12-minute film, produced by the Recreation Research Program at the Waterways Experiment Station, documents approaches field personnel have utilized to accomplish O&M activities at their projects. The film shows managers faced with manpower and budget cuts how to work with senior citizens, scout troops, 4-H clubs, and other volunteer groups to achieve more efficient and effective management of Corps facilities. The film is also available to be shown to civic groups to solicit their participation. For more information, contact A. J. Anderson, U. S. Army Engineer Waterways Experiment Station, P. O. Box 631, Vicksburg, MS 39180.

ON-GOING RESEARCH

Visitor Safety and Security

Progress in fulfilling the objectives of the Visitor Safety and Security Study (see RECNOTES Vol. R-78-3) is primarily occurring in three separate but related areas:

Visitor Safety Survey. Techniques currently in use throughout the Corps and other agencies that address existing visitor safety problems are being identified and evaluated. We are now in the process of identifying unusual or unique approaches to solving visitor safety problems, so if anyone is aware of approaches that could be included in subsequent studies, we would like to know about them.

Analysis of Criminal Activity and Vandalism. The problems of criminal activity and vandalism at Corps recreation areas are being addressed in a larger study of the security of operational facilities at Corps Civil Works projects sponsored by the OCE Office of Security and Law Enforcement. A study is being conducted that will, as a part of the effort, provide data on crimes committed in Corps recreation areas and establish the extent of criminal activity and vandalism at Corps projects.

Visitor Safety and Security Program. The results of the previously mentioned efforts will be incorporated into an overall examination of Visitor Safety and Security Programs within the Corps and how they interface with the planning, design, and management of recreation areas. Projects possessing a diversity of recreation facilities, user groups, and types of security safety problems were selected for study. The projects include (Project/District): Milford Lake/Kansas City; Saylorville Lake/Rock Island; Nolin Lake/Louisville; West Point Lake/Mobile; New Hogan Lake/Sacramento; and Somerville Lake/Fort Worth.

At the completion of the data-gathering and analysis phase of the study, one of the original study sites will be selected to demonstrate the techniques identified and developed. The effectiveness of these techniques will then be monitored and evaluated, and criteria for implementation at other Corps projects will be established.

Planning and Design Criteria for Recreation Roads and Sanitary Facilities

Roads and sanitary facilities at Corps of Engineers projects represent a substantial portion of the recreation budget in terms of both initial construction and annual O&M costs. In many cases, these facilities are overdesigned in terms of number and size versus actual usage; the facilities often exceed the expectation and actual needs of the visitors.

A 3-year effort was begun in FY 80 to examine the costs associated with design, construction, and maintenance of existing, proposed, and alternative facilities. In addition, a survey will be conducted to determine visitor expectations and actual needs for various types of facilities. These two work elements will be correlated to determine the most cost-effective designs for meeting visitor needs and expectations.

The objective of the work unit is to provide additional guidance to the planner/designer as to the timing and level of development of roads and sanitary facilities that will be cost effective yet respond to visitor needs and expectations. The work is intended to supplement, not supersede, the existing Engineering Manuals concerning these facilities.

During this initial phase of the research, we would appreciate any information, recommendations, or comments from interested individuals.

Methodology to Determine Concession Opportunity

A study to develop a methodology to determine concession opportunity at Corps of Engineers' water resources development projects has been initiated. The study will include:

- Review of administrative and legislative requirements for concession operation
- Determination of visitor perceptions of concession operation
- Identification and evaluation of potential concession opportunities and development of model market analyses for those opportunities
- Development of guidelines for determining optimal concession operation
- Evaluation of administrative and operational aspects of the Corps lease-compliance program.

In addition, a preliminary investigation will be conducted this summer (1) to review existing feasibility models for applicability given existing Corps regulations and provide guidelines for utilization of the generic processes as they relate to concession operation and (2) to identify and describe those factors that influence the feasibility of concession operation and develop procedures for incorporating them into model market analyses.

It is anticipated the overall research results will be presented in the form of a technical report and a user manual that will provide guidance in applying the methodology.

VPIS

Visitor Perception and Interpretative Service (VPIS) contributions were obtained from various field contacts. Due to space limitations, some articles may have been edited. However, more detailed information may be obtained by contacting the individuals who submitted the articles.

New England Division

OFF-ROAD VEHICLE WORKSHOP

Programs developed in the New England Division at Thomaston Dam this summer demonstrated the potential for exciting and unique interpretive efforts for the Division. One of the most useful, in terms of public perception of and cooperation with NED's resources management efforts, took advantage of the widespread interest in off-road vehicle trails at Thomaston Dam, Connecticut.

Thomaston Dam is one of the few NED projects where the use of trail bikes off the road is permitted. One of the Division's Park Rangers coordinated a trail bike clinic with a large local motorcycle club. The day's activities included workshops on trail bike safety, protective gear, control of noise, and—most important to Corps efforts—responsibile riding and respect for property and the environment. Following the workshops an interpretive trail ride of the project facilities and natural features was offered. The response and respect generated by this event emphasizes the importance of recognizing the public's needs and capitalizing on unique opportunities for interpretation.

(Submitted by Libby Hopkins (FTS 836-7305))

Omaha District

POWERHOUSE TOUR GAMES

In many of our water resource projects throughout the nation, Corps Rangers share a common interpretive duty—powerhouse tours. The powerhouse, with all of its whirling wonders, is a particularly fertile ground for creativity. So many terrific gadgets to interpret! However, a little innovation is clearly needed.

Hydropower is often a difficult concept for children to understand. A Corps tour guide must find a method to explain the hydropower process in the simplest of terms. Yet, the tour guide must avoid talking down to young visitors. Children will not respond favorably when being treated as having inferior intelligence. As many educators have found, participatory games can be an excellent method whereby difficult concepts are broken down into a series of simple ideas and thus made coherent for most children. Let me introduce you to a game that has been used to explain hydropower and has been smashingly successful. It's called "The Living Turbine."

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From the Field

PUBLIC PARTICIPATION QUIETS PUBLIC OUTCRY

One of the most popular recreation areas in the Rock Island District, the 77-acre Sugar Bottom Recreation Area at Coralville Lake, has been used for 15 years by campers, swimmers, boaters, and a wide variety of other users. Its popularity grew to the point that this spring the area was designated a fee camping area to reduce use to the carrying capacity of the area's resources. The resulting exclusion of day users from the area created an unexpectedly loud public outcry that resulted in the Corps calling a public meeting to determine alternate means to balance use with capacity.

Approximately 200 people attended the 5 July meeting. The District Engineer, Col. F. W. Mueller, explained the rationale, legal constraints, and errors in judgment that resulted in the fee campground designation of the entire Sugar Bottom area.

Col. Mueller then did something unusual...he broke the audience into five decision groups, assigned a Corps manager to each group to answer questions, and requested that each group reach its own decision as to how the popular Sugar Bottom area should be managed. The results? Each of the five groups reached the same conclusion. The majority of the area should remain as it is, a limited-access fee campground, but a small portion of the area should be set aside for the exclusive use of day users.

This decision was developed into a management plan by the Corps resource managers and in mid-July, the compromise plan was implemented.

The months since the plan began operating have shown that the compromise plan has worked. Use of the area has been reduced to environmentally acceptable levels, and user groups no longer feel unfairly excluded from this public recreation area. More importantly, the whole Sugar Bottom experience has shown that public involvement can be more than a forum for confrontation. It can be a workable technique to reach better management decisions.

Picture a hoard of 30 bouncing third-graders who have descended on your powerhouse. After briefly entertaining the thought that you should hide behind the nearest generator and pray fervently that they'll go away, you courageously approach them and welcome them to the tour. You ask them if anyone has even heard the word "hydropower," and mention that it is the process whereby water power is converted into mechanical energy and thence into electrical energy. After this statement, you are greeted with blank faces and bored sighs. Being a hotshot Corps interpreter, you immediately change tactics. "Let's play a game!" you announce. Gleeful shouts follow.

You now proceed to divide the group in half. You direct the members of one group to join hands and spread shoulder-to-shoulder across the floor. "Hold tight, everyone, because you're the dam." "Hey, we're the dam!"

The second group is commanded to line up in back of the dam. "O.K., Group 2, everyone press as hard as you can against the dam, but don't break it." The children shout with excitement—the dam children strain to hold on to each other; the water children push as hard as they can.

At this point, you announce that you have assumed a new identity—you are now a turbine! You position yourself in front of and between two dam children. You announce that their arms have become a gate and when you give the word they should drop their arms and allow the gate to open.

"Now!" The water children come rushing through. As they run by, you start spinning like a top. The children laugh and shout. You stop your gyrations with an out-of-breath laugh. You ask everyone to sit down in a circle around you. Delighted and alert, the children crouch around you. Now, in simple terms, you can explain all about dams, turbines, and energy.

(Submitted by Jeanne Minahan (FTS 864-4127))

This bulletin is published in accordance with AR 310-2. It has been prepared and distributed as one of the information dissemination functions of the Environmental Laboratory of the Waterways Experiment Station. It is primarily intended to be a forum whereby information pertaining to and resulting from the Corps of Engineers' nationwide Recreation Research Program can be rapidly and widely disseminated to OCE and Division, District, and project offices as well as to other Federal agencies concerned with outdoor recreation. Local reproduction is authorized to satisfy additional requirements. Contributions of notes, news, reviews, or any other types of information are solicited from all sources and will be considered for publication as long as they are relevant to the theme of the Recreation Research Program, i. e., to improve the effectiveness and efficiency of the Corps in providing recreation opportunity at its water resource development projects. This bulletin will be issued on an irregular basis as dictated by the quantity and importance of information to be disseminated. Communications are welcome and should be addressed to the Environmental Laboratory, ATTN: A. J. Anderson, U. S. Army Engineer Waterways Experiment Station, P. O. Box 631, Vicksburg, Mississippi 39180, or call AC 601, 634-3657 (FTS 542-3657).

NELSON P. CONOVER
Colonel, Corps of Engineers
Commander and Director